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Crafting Project Managers' Careers: Integrating the Fields of Careers and Project Management

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Abstract

Project managers experience unique careers that are not yet sufficiently understood, and more people than ever before are pursuing such careers. The research on project management and careers is therefore urgently needed in order to better understand the processes and systems shaping the careers of project managers. We address this gap by reviewing several key career theories and constructs and examining how these are mobilized to understand project managers' careers in existing research. Our main conclusion is that boundaryless career theory has been the dominant career perspective in project management research, whereas other career theories—specifically protean career theory, social cognitive career theory, career construction theory, and sustainable career theory—are far less often mobilized as a basis for studies. We also find that some of the most popular constructs in careers research, such as career success and employability, have been used in recent project management research. However, their use in these studies is often implicit and does not necessarily leverage existing work from the careers field. We argue that there is strong potential for further and more systematic integration between project management and careers research in order to enrich both fields, and we offer a research agenda as a starting point.

Keywords

career development, project management, career success, career resources, employability, review

Introduction

The research on project management has developed from a fairly narrow focus on specific functional areas (Kerzner, 2017) to an increasingly multidisciplinary field of study, including links with strategic management (e.g., Meskendahl, 2010), the social sciences (e.g., Blomquist, Hällgren, Nilsson, & Söderholm, 2010), and human resource management (e.g., Huemann, Keegan, & Turner, 2007). Scholars argue, however, that better integration of project management knowledge with related fields (Gerald & Söderlund, 2018) such as human resource management (Keegan, Ringhofer, & Huemann, 2018) is needed to advance our understanding of projects as an important organizational context.

In line with these calls to link project management with other disciplines, there is an emerging literature in which career theory is mobilized to understand how project professionals develop, construct, conceptualize, or experience their careers. However, this stream of literature needs stronger integration with existing research from the careers discipline in order to better capture the unique contingencies that appear, from research on topics such as leadership, to constitute project managers' careers (Crevani, Lindgren, & Packendorff, 2010).

Furthermore, leveraging existing careers research can open up new perspectives and ideas in project management research. Bredin and Söderlund (2013) argue that the current scarcity of studies on project managers' careers is problematic both from a project management perspective (i.e., project managers are everywhere nowadays, so we need to understand their career processes) and a career development perspective (i.e., project management offers a unique context to better understand career processes). Further integration of the literature on careers and project management is a crucial step considering the currently very limited understanding of project managers' career processes and systems.

Integrating research on careers and project management also addresses recent developments in the careers literature that

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emphasize the growing importance of context. In this review, we follow the widely cited definition of Arthur, Hall, and Lawrence (1989, p. 8) who define a career as “the evolving sequence of a person’s work experiences over time.” More generally, we follow the domain statement of the Academy of Management Careers Division¹ in our focus in this review. Research in this field is typically published in applied psychology journals (e.g., *Journal of Applied Psychology*, *Journal of Organizational Behavior*), management journals (e.g., *Journal of Management*, *Personnel Psychology*), and a number of dedicated career journals (e.g., *Journal of Vocational Behavior*, *Career Development International*, *Journal of Career Assessment*). Finally, a recent review of careers research by Akkermans and Kubasch (2017) provides a good starting point for the topics that are associated with careers research, and we used their so-called trending topics as a starting point for this review.

The scholarly discussion on careers has mainly concentrated on individual agency in recent years, focusing, for example, on competencies and behaviors necessary to achieve career success. However, career scholars argue that a more explicit consideration of context is important to move the field forward (e.g., Inkson, Gunz, Ganesh, & Roper, 2012), and that projects are an example of such a context (Akkermans & Kubasch, 2017). Project management offers an interesting context for career studies given the many unique career-related features, such as relatively many movements in short periods of time, including internal, external, lateral, and upward movements (El-Sabaa, 2001), not to mention the high pressures that are associated with a role as project manager (Bredin & Söderlund, 2013). Research integrating the fields of careers and project management is valuable for both fields: The project management literature needs a better understanding of the complex processes involved with project managers’ career development, and careers scholars could benefit from the unique insights that the project management context offers in terms of career processes and systems.

In this article, we aim to provide a conceptual starting point for such integration. Specifically, we review some of the key theories and constructs in the career literature, and explore how project management scholars study careers as well as the theories and constructs upon which they base their work. To achieve this, we focus on how career theory is mobilized by scholars writing on project managers’ careers and concentrate primarily on the three preeminent project management journals: *Project Management Journal*[®], *International Journal of Project Management*, and *Journal of Managing Projects in Business*. The main contribution of this article is therefore to present an overview of project management careers research to date in the field’s main journals against the background of developments in career theory, with an aim to identify opportunities to integrate the latter with existing as well as future research on project management. This could help both career and project management scholars to further pursue the integration of these two streams of literature, as well as having practical implications for understanding and potentially steering

project managers’ career paths from the perspectives of individual project managers and those involved, organizationally, in supporting their careers.

Outline of the Article

In the remainder of this article, we will first provide a brief historical overview of the field of career studies to shed more light on the general topics that were popular in different time periods. Next, we will discuss a number of theoretical perspectives that have shaped careers research in the past few decades. For each of the theoretical perspectives, we first provide an overview of its main assumptions and mechanisms, and then a section in which we present project management research that has leveraged this particular perspective. Next, we present a section on career concepts that have dominated recent careers research. Here, we first explain the concepts and then review project management research in the field’s main journals that have applied these concepts. Finally, we reflect on the main findings of our review, and we offer an agenda for future research.

Careers Research: A Brief Historical Overview

Until the 1980s, research on vocational behavior and career development mostly focused on career interests and career choice (Wang & Wanberg, 2017). The underlying idea was that people choose one occupation and remain with their employer throughout their career (Ginzberg, 1972). The main emphasis in the literature was on matching peoples’ career interests with the right vocational choices. The frameworks of Super (1957) and Holland (1959), and rich literature on job choices and success (Hall, 1976), became prominent. A career was mostly considered to be a stable, intraorganizational phenomenon based on matching individual and organizational needs, with career “stages” or “anchors” (Schein, 1978), where each would offer its own unique challenges. Career success was mostly signified by choosing the right occupation and achieving internal upward mobility.

During the 1980s, the focus of careers research began to shift as a result of increasing globalization and decreasing job security. The emphasis changed from organizationally managed to self-managed careers. Researchers began to differentiate between types of workers (e.g., permanent versus flexible staff) (De Vos, Akkermans, & Van der Heijden, 2019a). Careers research as a whole became a broader field of inquiry, focusing not only on interests and choices but also on a wide array of career-related topics such as job search, aging workforce, and predictors of career success (Wang & Wanberg, 2017). These changes also implied a gradual shift from career development as a one-off occupational choice toward a dynamic process with multiple career choices across one’s life span (De Vos et al., 2019a). The traditional notion of career stages and anchors was mostly abandoned, and idiosyncratic

career processes became a primary topic of study with the introduction in the 1990s of several theoretical perspectives emphasizing individual flexibility and development (DeFillippi & Arthur, 1994; Mirvis & Hall, 1994).

Since the start of the new millennium, careers research has continued to focus on self-managed careers and individual agency, with increasing emphasis on employability (e.g., Forrier & Sels, 2003) and proactive career behaviors (e.g., King, 2004). This trend further signifies the almost exclusive focus of empirical careers research on the individual career actor and the competencies and behaviors they require to achieve career success. This is surprising, considering that work and careers have become much more dynamic and complex and, as such, require continuous learning and the ability to deal with unforeseen circumstances. In this light, studying project managers' careers is especially valuable because of the considerable insight into contextual factors and the changing world of work this can offer to the careers literature.

In the next section, we review a number of influential career theories and subsequently reflect on studies in the project management literature that have—explicitly and implicitly—leveraged these theories thus far.

Theoretical Perspectives Shaping Careers Research

In the following, we discuss several theoretical perspectives that have shaped the careers literature in the past 20 years, thereby acknowledging that this list is not exhaustive. We chose these particular theoretical perspectives because they have been the dominant perspectives in the careers literature in terms of citations and general impact. We also included the sustainable career perspective, which is a relatively new perspective, because we believe it has particular relevance for project management research, as it explicitly considers the role of context in theorizing about careers (cf. the special issue of *Project Management Journal* (volume 47, issue 6) that focused specifically on sustainability issues in project management research and practice).

Boundaryless Career Perspective

DeFillippi and Arthur (1994, p. 307) originally defined boundaryless careers as: “sequences of job opportunities that go beyond the boundaries of single employment settings.” This has occasionally been misinterpreted as boundaryless careers being unrelated to organizational careers, while originally, the seminal authors argued that competency building through *both* horizontal and vertical experiences *within and between* organizations should lead to benefits for individuals and organizations alike (Arthur & Rousseau, 1996; DeFillippi & Arthur, 1994). Arthur, Khapova, and Wilderom (2005) also emphasize that it is not the actual physical mobility that is important per se but rather the *opportunities* for mobility and *independence from* single employers. Underlying the notion of boundarylessness is a

changing psychological contract in which lifetime employment is no longer the norm, and employees become more independent and self-reliant.

According to the boundaryless career perspective, individuals need to acquire career capital in order to successfully manage their careers. This career capital is typically divided into three “ways of knowing:” knowing why, knowing whom, and knowing how (Eby, Butts, & Lockwood, 2003). Examples of these competencies include reflection, networking, and planning, respectively. Knowing *why* relates to individuals reflecting on and identifying with their careers, encompassing the organization they work for, but also balancing work and private life as well as non-work-related achievements. The focus is on career motivation and personal meaning. Knowing *whom* is about people's networks that go beyond organizational boundaries, and concerns both professional and personal social capital. Knowing whom relates to both internal and external networks. Finally, knowing *how* pertains to career-relevant skills and job-related knowledge, and encompasses idiosyncratic competencies that contribute to a person's talents and potential, as well as to the organization's knowledge base.

Most empirical studies on boundaryless careers focus on physical mobility (Arthur et al., 2005) rather than fully acknowledging the boundaryless career perspective. Recent developments have tended to emphasize the difference and interplay between physical mobility and psychological mobility (Sullivan & Arthur, 2006). Furthermore, Tams and Arthur (2010) argue that while boundaryless careers represent independence from a single employer, there are differences in potential for boundaryless careers across employment forms. The notion of a boundaryless career is likely to differ for a factory worker and a scientist, meaning that scholars need a better understanding of the role of context in boundaryless careers (Inkson et al., 2012; Rodrigues & Guest, 2010).

Boundaryless Career Perspective in Project Management Research

Project-based organizing is a common setting for the study of boundaryless careers for several reasons. First, work activity is organized in temporary projects embedded within more permanent organizations and networks (Keegan & Turner, 2002). Second, project-based careers are premised on mobility, which is both actual and anticipated because projects are by definition determinate (Winch, 2014), and careers are therefore premised on the assumption of boundary crossing (Bredin & Söderlund, 2013). Scholarship on project managers' careers therefore often mobilizes boundaryless career concepts and ideas.

Several exemplars can be cited. Skilton and Bravo (2008) draw on boundaryless career theory to examine the constraining nature of project preferences and social capital in project-based careers. They use the setting of motion pictures as an example of project-based production to examine the interplay between social capital and preferences in project type for career mobility. The main conclusions are that social capital and

project choice differences are examples of “non-organizational constraints on mobility in project-based, *apparently boundaryless*, self-managed careers” (p. 381, emphasis added). Jones and DeFillippi (1996) also used the American film industry as a project-based career, and argued that successful careerists need to develop six different career competencies in order to thrive. While not specifically aimed at project managers, their findings do imply that project managers—who are often involved in boundaryless careers—should develop these competencies in order to achieve career success. Jones (1996) also argues that these competencies might shift in salience across different boundaryless career stages, and with different implications for how project work should be organized. The implication for project managers’ careers is twofold: They need these competencies for themselves, and also need to provide opportunities to their project workers to develop them while working on the project.

Crawford, Lloyd-Walker, and French (2015) mobilize the boundaryless career perspective to conceptualize changes in careers, which are the results of the adoption of project-based ways of working. They hold that as individuals become more involved in project work, they accept higher levels of career uncertainty, which are the results of features of project-based working such as temporary organizing (Turner & Müller, 2003), which has implications for careers in project management roles. Similarly, Crawford, French, and Lloyd-Walker (2013) mobilize the boundaryless career perspective to study project managers’ career paths in an Australian context. They note that respondents’ discussions on how they managed their own careers strongly resonate with boundaryless (and protean) career logics.

Further examples include the work of Loogma, Ümarik, and Vilu (2004) that discusses how boundaryless career paths influence work-related identities of IT specialists. They also emphasize contemporary requirements for flexibility and mobility and how the shift toward boundaryless career paths can affect identity formation at work. The work of Bredin and Söderlund (2013) goes further than general links between the concepts of boundaryless and project-based careers to reveal additional complexity in these links. Picking up on points made by other theorists that projects and boundarylessness seem to go hand in hand, they argue that while project work would be assumed to promote the existence of boundaryless careers, their findings actually reveal efforts on behalf of firms to bound careers and ensure that project managers stay with the firm. Related to the issue of bounded versus boundaryless, Manning (2010) holds that, while project networks have typically been examined as rather boundaryless relational structures in project industries, they should instead be addressed as organizational forms to highlight the embeddedness of projects within more stable and enduring organizational forms.

The work of Zeitz, Blau, and Fertig (2009) examines the importance of institutional resources for project-based boundaryless careers. Their main contribution is to highlight that the resources needed for career success are institutional rather than

purely personal resources. The latter has been the key, but one-sided, focus of the boundaryless career literature. Welch, Welch, and Tahvanainen (2008) use boundaryless career theory to conceptualize career dynamics of international project workers and ask whether project careers are not just “borderless” but “boundaryless.” Their work focuses on issues such as moving across organizations and employers. Finally, Skilton (2009) draws links between boundaryless careers and project-based careers when he highlights the importance of “breakthroughs” as a career issue and argues that in several professions (e.g., software engineering, R&D) these play a major role in career progression. Breakthroughs also play a role in boundaryless careers, as individuals use networks to move between tasks, roles, and organizations (Sullivan & Arthur, 2006).

As well as the above-cited work where boundaryless career theory is explicitly mobilized in studies of project-based careers, authors also indirectly draw inspiration from boundaryless career perspectives and concepts. Tempest and Starkey (2004) indirectly reference boundaryless career theory when pursuing the implications of individualized careers and their impact on individual and organizational learning. They hold that project work and the increasing use of project teams result in individualized career patterns that have far-reaching implications for organizational learning and development. Savelsbergh, Havermans, and Storm (2016) also draw indirectly on concepts associated with boundaryless careers in framing the types of competencies that theory indicates are required by project managers throughout their careers. They note that project managers need to be proactive in shaping their own career paths because they continuously move from project to project, and thus have to look for opportunities themselves rather than depend on organizational support. Similar to Savelsbergh et al. (2016), Hölzle (2010) refers indirectly to the boundaryless career in her work on career paths of project managers, arguing that the transitory nature of projects makes it crucial for project team members to be proactive in managing their own careers rather than relying on other parties.

We continue in the next section with another widely used career theory—protean career theory—which gained momentum around the same time as boundaryless career theory and that also receives considerable attention in careers research.

Protean Career Perspective

A protean career was originally defined as: “a process which the person, not the organization, is managing. It consists of all the person’s varied experiences in education, training, work in several organizations, changes in occupational field, etc. The protean career is *not* what happens to the person in any one organization” (Hall, 1976, p. 201).

The core idea underlying the protean career perspective is its focus on a flexible view of how careers evolve over time and in social spaces (Mirvis & Hall, 1994), emphasizing that the primary responsibility for career management was shifting from

the organization to the individual. Hall (1996) argued that protean careers are about a shift in perspective from “a path to the top” to “a path with the heart,” emphasizing the key role of psychological success in career development. What sets the protean career perspective apart from traditional career thinking is its focus on the individual (versus the organization) as the primary career agent, freedom of growth (versus advancement) as the core value, and psychological success (versus position level and salary) as the key criterion for career success (Hall, 2004). A protean career is values driven and self-directed (Briscoe & Hall, 2006). Similar to the boundaryless career perspective, the protean career perspective argues that the psychological contract shifted from a relational one, based on long-term commitment, toward a more transactional contract, characterized by shorter-term exchanges (Hall & Moss, 1998).

Individuals need to develop two meta-competencies in order to achieve career success: self-awareness and adaptability (Hall, 1996). In other words, individuals need to be aware of their own strengths, weaknesses, and competencies, and they need to be able to adapt to changing (career) circumstances as the foundation for a successful career. Mastering these meta-competencies allows individuals to “learn how to learn,” and both are crucial to acquire, so that individuals can proactively learn and adapt. Developing only one of these two meta-competencies can lead to reactivity (high adaptability, low self-awareness) or inaction (high self-awareness, low adaptability). As an extension of this focus on self-awareness and adaptability competencies, the protean career perspective argues that continuous learning is an important element of protean careers (Hall & Moss, 1998).

Recent research has attempted to shed more light on the protean career concept, arguing that it consists of two separate dimensions: a protean career *orientation* and a protean career *path* (Gubler, Arnold, & Coombs, 2014). The protean career orientation is mainly about people’s attitudes toward their careers, whereas the protean career path relates to the actual behaviors enacted by individuals. These are not necessarily aligned with each other (Gubler et al., 2014). In recent years, the protean career orientation has been dominant in research, linking it to career success (De Vos & Soens, 2008), vocational identity (Hirschi, Jaensch, & Herrmann, 2017), and work–life balance (Direnzo, Greenhaus, & Weer, 2015). Protean career paths have received less empirical attention.

Protean Career Perspective in Project Management Research

References to protean careers in project management writing are evident though far less frequent than those to boundaryless careers. The protean career is sometimes used alongside or as a synonym for the boundaryless career, as is the case with Crawford et al. (2013), who argue that both approaches see the individual as being in control of his or her own career. The authors further state it is especially important for project workers to take control of their own career development in order to

develop relevant skills as they move between projects. Similar to project management research on boundaryless careers, some studies seem to implicitly acknowledge protean career elements, such as the self-directed nature of project careers (Tempest & Starkey, 2004) and the need to be proactive in one’s career development (Savelsbergh et al., 2016).

The boundaryless and protean career perspectives have been at the fore of careers research during the past 25 years. Yet, there are other theories specifically aiming to explain contemporary career development that have also frequently been used in research. The first of these is social cognitive career theory, which we review in the next section.

Social Cognitive Career Theory

Social cognitive career theory (SCCT) originates in the work of Lent, Brown, and Hackett (1994) and was based on Bandura’s (1986) general social cognitive theory, which emphasizes the interplay between individual cognitive processes and social processes in driving human behavior (Lent, Brown, & Hackett, 2002). Fundamental to SCCT is the idea that career development is influenced by three interrelated factors: personal attributes, external environmental factors, and actual behaviors (Lent et al., 1994). SCCT’s core variables are self-efficacy, outcome expectations, and personal goals (Lent et al., 2002), and their interplay forms the determinants of individual agency. First, self-efficacy is a person’s judgment of his or her ability to perform a certain task or behavior and is considered a dynamic set of beliefs rather than a stable personality trait. Second, outcome expectations are personal beliefs about the results of performing certain behaviors, which can include extrinsic (e.g., anticipated rewards) and intrinsic (e.g., anticipated pride) outcomes. Finally, personal goals are about the determination to engage in certain activities. They help guide and sustain people’s behaviors. The critical assumption underlying SCCT is that these variables determine self-regulatory behaviors as the result of their complex interplay. For example, self-efficacy and outcome expectations acting together shape one’s goals, and the attainment of goals potentially influences one’s self-efficacy (Lent et al., 2002).

The original SCCT framework also puts forward three career development processes (for a full discussion, see Lent et al., 1994, 2002). The theory refers to these as “models,” which refers to the notion that each of these models describes how a central outcome (i.e., interest development, vocational choice, and performance) is impacted by the three core constructs of self-efficacy beliefs, outcome expectations, and personal goals (for a visual representation of the SCCT models, please see Lent et al., 2002, p. 266). The model of *interest development* is the first one. Vocational interests are an important predictor of career-related behaviors, and the formation of those interests is assumed to be the result of an interaction between self-efficacy and outcome expectations. In situations where people feel capable and expect valued rewards, they are likely to develop an interest toward a certain behavior, which in

turn is likely to lead to the formulation of goals and, subsequently, to actual behaviors. A feedback loop, back to self-efficacy beliefs and outcome expectations, is assumed. Alongside personal attributes and behaviors, the external environment also plays an important role, as people are more likely to develop an interest in things to which they have been exposed. For example, people living in poverty may not develop an interest in jobs requiring higher education because they have not been exposed to such career options.

The second model is that of *career choice*. Building on the interest development model, SCCT assumes that vocational interests are an important predictor of goal formulation, which then leads to actual career choices, ultimately feeding back to interests and goals. At the core is the idea that—all else being equal—people are likely to choose occupations that they are interested in. However, SCCT also emphasizes that contextual influences can play an important role here: Career choices can be altered when people experience major barriers or a lack of support for their primary choice of interest.

The third model is *performance*, which is about the accomplishment and persistence of behaviors in career development. Following SCCT principles, the assumption is that self-efficacy and outcome expectations interact to form performance goals, which then influence a person's performance, ultimately feeding back to their self-efficacy beliefs and outcome expectations. In addition, SCCT argues that ability is an important factor in the performance model, as ability is a predictor of self-efficacy and outcome expectations, thereby contributing to the complex interplay between factors.

In a recent addition to SCCT, Lent and Brown (2006, 2013) introduced a fourth model to the theory, which is about satisfaction and well-being. Similar to the other three models, the key SCCT assumption here is that self-efficacy beliefs and outcome expectations contribute to goal-directed activities, and subsequently to work-related satisfaction and well-being. The authors also argue that certain personal factors (e.g., extraversion, conscientiousness) and contextual factors (e.g., support) contribute to this process. The SCCT pathways of career interest, choice, and performance have received a lot of empirical support over the years (e.g., Brown, Lent, Telander, & Tramayne, 2011; Sheu et al., 2010), and the recently introduced pathway of satisfaction has also begun to spur empirical investigation (e.g., Lent et al., 2017; Ojeda, Flores, & Navarro, 2011). A number of recent review and empirical studies about SCCT can be found in the special issue of the *Journal of Career Assessment* (volume 25, issue 1, 2017).

Social Cognitive Career Theory in Project Management Research

Although career perspectives other than boundaryless and, to a lesser extent, protean careers have been scarce in the project management literature, existing exemplars point to much

potential. Crawford et al. (2015) use SCCT in an article on career choice and the experience of project-based work. Their work focuses on the involvement of women and men in project roles, exploring and making links with their involvement and how they perceive the experience of project-based work. Both personal and contextual factors that influence career development in a project context are brought to light. The fact that project professionals jump, within or between organizations, from one project to the other, creates the need to take a more proactive role in the career planning and development and highlights the constructing aspects of a project-based career as well as the personal attributes associated with this. Similarly, Lloyd-Walker, French, and Crawford (2016) use SCCT as a framework to understand how people working in project roles may be more likely to see opportunity than risk in the inherent uncertainty of projects. They argue that the ideas from SCCT help to explain how people form interests, make career choices, and achieve career success. While not explicitly mentioning SCCT, Blomquist, Farashah, and Thomas (2016) showed that project management self-efficacy is an important antecedent of project performance, which is in line with SCCT principles.

Although SCCT has not been mobilized as often as boundaryless and protean career theory, it can be considered an influential perspective in careers research that has gained momentum in recent years. Another example of a career theory that is increasingly used in empirical research is career construction theory, which we will discuss in the next section.

Career Construction Theory

Career construction theory (CCT) (Savickas, 2002, 2005) argues that careers do not simply unfold but are actively constructed by individuals in their attempts to adapt to their environment successfully. At its core, CCT is a theory about adapting to social environments with the ultimate goal of person-environment integration (Savickas & Porfeli, 2012). In other words: It is about how people actively construct their vocational self-concepts in their work throughout their careers (Rudolph, Zacher, & Hirschi, 2019). As such, CCT adopts a constructivist and contextualist perspective (Savickas, 2002) with the core assumption that individuals assign meaning to their vocational choices and experiences such that a career is not just a series of job-related experiences but a narrative that individuals create that binds together those experiences in meaningful ways (Savickas, 2005). Hence, the theory looks at the career narratives that people construct, focusing on dynamic career construction processes over time (Rudolph et al., 2019). As Hartung and Taber (2008) note, CCT is about *what* traits an individual possesses, *how* they adapt to transitions and changes, and *why* they move in a particular direction.

CCT is based on three concepts: developmental contextualism, vocational self-concepts, and developmental tasks (see Savickas, 2002). First, developmental contextualism refers to

the construction of careers as the result of an interplay between the individual and their context. More specifically, individuals have several life roles that are shaped by—and shape—their context (e.g., culture, ethnic group, neighborhood, school). The centrality of particular roles can differ between individuals (e.g., prioritizing one's role as family member over one's role as employee), and individual career patterns are a result of how people manage and organize these roles and on the constant interplay between personal characteristics and opportunities provided by a given context.

Second, vocational self-concepts are collections of attributes that individuals perceive as relevant to work roles, and that serve to control, guide, and evaluate behaviors. These self-concepts are made up of vocational characteristics (e.g., personality traits, abilities), and each occupation differs in the set of vocational characteristics required. As a result, people are typically qualified for a variety of occupations because of the match between certain vocational characteristics and occupational requirements. Furthermore, occupational success is determined by the extent to which individuals can leverage their vocational characteristics, and an individual's satisfaction with a particular occupation is the result of the degree to which they can implement their vocational self-concept in that occupation. However, this is not a passive matching issue but rather an active construction process in which the vocational self-concept can be developed and implemented in different work roles. This is, once again, assumed to be a dynamic interaction between individual and social factors. Ideally, this should be a mutually enriching interaction in which occupational roles and social expectations validate and develop the individual's vocational self-concept.

Third, developmental tasks are about sequences of tasks that serve to (re)establish stability in continuity across stages in one's career. According to CCT, there are five such career stages: growth, exploration, establishment, maintenance, and disengagement, each featuring major developmental tasks. These career stages are considered to be associated with particular phases in a person's life, for example, career growth being most prominent among children up to the age of 13, whereas the final phase of disengagement is related to ages 56 and older. The assumption of CCT is that each of these phases has its own developmental tasks that are required to establish a balance, for example, the exploration phase focusing on ways to fit oneself into expectations of society, and the establishment phase being about implementing one's vocational self-concept into an occupational role. The process of career construction is spurred by the developmental tasks in each career phase and can be fostered by achieving an adaptive fit between person and environment. CCT has received a lot of empirical support in recent years, especially in the form of research on career adaptability (Savickas & Porfeli, 2012). An overview of recent empirical developments in CCT can be found in the special issue of the *Journal of Vocational Behavior* (volume 111, 2019).

Career Construction Theory in Project Management Research

Direct reference to CCT is not found in the project management literature. Arguments can be made, however, for greater and more systematic mobilization of this concept, which seems highly relevant to many studies in the field. For example, Savelsbergh et al. (2016) underpin their understanding of the career experiences of project professionals, especially self-guided development, with career construction ideas, arguing that self-guided development suggests independent efforts and approaches taken by project managers themselves. Also, Crawford et al. (2013) underpin their arguments about careers as "a complex adaptive entity" with ideas commonly found in CCT. They recognize that careers can be influenced by the environment and that individuals respond to and adapt their career path to changing environments. A whole-of-life approach is taken and this approach to careers is linked to increased mobility and development over time, driven by the individual (Briscoe, Hall, & DeMuth, 2006).

Patton and McMahon (2006) use a systems theory framework to explain career development. Following systems theory, this career development framework acknowledges the influence of the external environment on career development and the role of the individual in their personal career planning. Loogma et al. (2004) argue that careers have become much less predictable, and that there is a shift from lifetime employment to lifetime employability. This relates to CCT principles in the sense that workers need to develop transferable skills and adaptive strategies. In their introductory article to a special issue on advancements in CCT, Rudolph et al. (2019) explicitly call for contextualization of the theory's principles; the project management context would be an excellent one to respond to this call.

The final theoretical perspective that we discuss is the sustainable career perspective. Scholarly thinking about sustainable careers has only recently started to emerge. However, it is potentially very promising to integrate insights from this nascent research field with the project management context.

Sustainable Career Perspective

A recent addition to the career literature is the perspective of the sustainable career. Van der Heijden and De Vos (2015, p. 7) defined sustainable careers as "sequences of career experiences reflected through a variety of patterns of continuity over time, thereby crossing several social spaces, characterized by individual agency, herewith providing meaning to the individual." They hold that careers are comprised of a complex collection of objective experiences and subjective perceptions, thereby connecting with Arthur et al.'s (2005) argument that objective and subjective careers are inherently interdependent. The sustainable career perspective was put forward not as a replacement for existing models but rather as an addition to them, in which

the role of sustainability is a central notion when examining career development.

In their conceptual work on sustainable careers, De Vos, Van der Heijden, and Akkermans (2019b) argue that the key indicators of a sustainable career are happiness (e.g., engagement), health (e.g., workability), and productivity (e.g., performance). To analyze sustainable careers and those three central outcomes, they argue that there are three key dimensions that need to be taken into account: person, context, and time. As such, the sustainable career paradigm captures not only the dominant emphasis in careers research on individual agency but also contextual influences and life span perspectives. Thus, the sustainable career perspective adopts a *systemic* and *dynamic* approach (De Vos et al., 2019b).

First, the person dimension emphasizes that individual agency and personal meaning are crucial issues to consider for sustainability of a career. Agency means that individuals have an important role to play in shaping their own sustainability through proactive behavior and control: proactively crafting one's career (Akkermans & Tims, 2017) and being resilient in the face of setbacks (Seibert, Kraimer, & Heslin, 2016). Meaning is about being mindful of what really matters in one's career. Personal needs, values, and resources form an important foundation for career-related decision making and are a key ingredient of the sustainability of one's career. Indeed, the importance of meaningfulness has been demonstrated in empirical work on satisfaction, motivation, and engagement (Hu & Hirsch, 2017).

Second, the context dimension stresses that an understanding of the various contextual spaces that individuals are part of need to be considered when analyzing the sustainability of careers. There are different layers of context that can be taken into account: work group level, organizational level, occupational level, national level, and the private life level. All of these can play an important role in the sustainability of one's career, including the balance between job characteristics (Bakker & Demerouti, 2017), human resource practices aimed at individual development (De Vos, Dewettinck, & Buyens, 2009), technological changes and digital transformation (Frey & Osborne, 2017), and challenges regarding time allocation between the work and home domains (Kossek & Lautsch, 2017).

Third, the time dimension argues that careers are cyclical and form dynamic processes of continuous learning. This is in line with life span perspectives of career development and means that individuals continuously redefine and strive for person-career fit over the course of their careers. Time is important to consider in the sense that certain career events can have both an immediate impact (e.g., losing one's job leading to unemployment) and/or a longer-term effect (e.g., a lack of training leading to someone ultimately not having up-to-date competencies). Finally, time can be examined in terms of interpersonal processes (i.e., what happens to some people does not happen to others) and intrapersonal processes (i.e., developments within people over time), implying that the

sustainability of careers is a dynamic notion in itself, and it can vary across one's life span.

The dynamic interaction between person, context, and time ultimately determines the sustainability of one's career (De Vos et al., 2019b). While the three dimensions offer useful ways of analyzing different aspects of career development, they interact in complex ways to shape sustainability. Two people with exactly the same values and ideas about meaningfulness can have completely different levels of sustainability due to contextual factors, such as an unsupportive working environment, or an occupation that matches perfectly with these values. The role that career shocks play in the sustainability of careers is also important. These are disruptive and extraordinary events that are, at least to some degree, caused by factors outside the individual's control (Akkermans, Seibert, & Mol, 2018). Such shocks (e.g., being laid off, losing a loved one, getting an unexpected promotion) can have widely different effects on people depending on their individual attributes (e.g., proactivity, resilience), their context (e.g., work, private life), and their timing (e.g., early versus late career). There is recent empirical evidence suggesting that career shocks are indeed a powerful contextual influence on careers, for example impacting on career competencies, career success, and employability (Blokker, Akkermans, Tims, Jansen, & Khapova, 2019), and impacting on career satisfaction and work engagement (Kraimer, Greco, Seibert, & Sargent, 2019). Other contextual and temporal elements critical in career sustainability are, for example, organizational career practices (Kossek & Ollier-Malaterre, 2019; Straub, Vinkenburger, & Van Kleef, 2019), work-home interactions (Hirschi, Steiner, Burmeister, & Johnston, 2019), and specific job and occupational characteristics (Chudzikowski, Gustafsson, & Tams, 2019; Richardson & McKenna, 2019). An upcoming special issue on sustainable careers will be published in the *Journal of Vocational Behavior* early in 2020 and will offer both conceptual and empirical insights into this perspective.

Sustainable Career Perspective in Project Management Research

We found no work directly and systematically linking a sustainable career perspective and project managers' careers or careers in project-based organizations. Indirectly, Turner, Huemann, and Keegan (2008) challenge the sustainability of careers in project-based organizing by examining the threats to well-being embedded in project-based careers, which are associated with uneven workloads, precariousness of type and location of work, constant demands on social skills when entering and leaving projects, and so on. However, beyond that, sustainability of project managers' careers is a topic that has not yet been explicitly researched. Given the explicit perspective of person-career fit, and the interplay between individual, temporal, and contextual influences on peoples' careers, it would lend itself well to analyzing the dynamic career paths that project managers typically experience.

Table 1. Summary of Explicit and Implicit References to Career Theory

Theory/ Perspective	Explicit Reference to Theory	Implicit Reference to Theory
Boundaryless career perspective	<ul style="list-style-type: none"> – Bredin and Söderlund (2013) – Crawford et al. (2013) – Turner and Müller (2003) – Welch et al. (2008) – Zeitz et al. (2009) – Crawford et al. (2015) – Loogma et al. (2004) – Manning (2010) – Skilton (2009) – Skilton and Bravo (2008) 	<ul style="list-style-type: none"> – Hölzle (2010) – Savelsbergh et al. (2016) – Tempest and Starkey (2004)
Protean career perspective	<ul style="list-style-type: none"> – Crawford et al. (2013) 	<ul style="list-style-type: none"> – Savelsbergh et al. (2016) – Tempest and Starkey (2004)
Social cognitive career theory (SCCT)	<ul style="list-style-type: none"> – Crawford et al. (2015) – Lloyd-Walker et al. (2016) 	
Career construction theory (CCT)		<ul style="list-style-type: none"> – Crawford et al. (2013) – Savelsbergh et al. (2016) – Loogma et al. (2004) – Patton and McMahon (2006) – Turner et al. (2008)
Sustainable career perspective		

Table 1 provides an integration of dominant career perspectives and theories with existing project management research.

After reviewing a selection of career theories, we now discuss a number of the most popular career constructs of recent years.

Core Constructs of Careers Research

In a recent review, Akkermans and Kubasch (2017) highlighted several topics that have been at the forefront of careers research in recent years. The purpose is not to repeat their work, but to highlight some of those career-related constructs that have been prominent in the scholarly discussion, and may prove fruitful for further analyses when studying project managers' careers. We chose these three constructs because they were among the most popular topics in the review study mentioned above, and also because recent calls in careers research have explicitly requested a more differentiated understanding of career success, and a more contextualized understanding of employability and career

resources. As such, integrating project management research on these constructs would be highly valuable for both career and project management research. We do of course acknowledge that this selection is only a starting point for more integration between the two fields of research, as other topics (e.g., proactive career behaviors, career-related attitudes, and project-family interaction) would also offer important knowledge on the careers of project managers.

Career Success

Career success is often defined as “the accumulated positive work and psychological outcomes resulting from one’s work experiences” (Seibert & Kraimer, 2001). The careers literature has typically distinguished between two types of career success: objective and subjective career success. The former is about verifiable attainments, such as salary and number of received promotions, whereas the latter is about an individual’s reactions to his or her career experiences (Heslin, 2005), and has typically been operationalized in terms of career satisfaction (Greenhaus, Parasuraman, & Wormley, 1990). A meta-analysis (Ng, Eby, Sorensen, & Feldman, 2005) showed that the antecedents for both types of career success are different: Whereas objective career success was mostly predicted by human capital (e.g., work experience, knowledge) and socio-demographic status, subjective career success was more strongly predicted by organizational sponsorship and stable individual differences. While both types of career success are inherently interdependent (Arthur et al., 2005), there is a clear trend in careers research that especially subjective career success has become dominant in recent years (Akkermans & Kubasch, 2017). An abundance of empirical evidence has been presented about factors that promote subjective career success, such as occupational self-efficacy (Abele & Spurk, 2009), career adaptability (Zacher, 2014), and career competencies (Akkermans & Tims, 2017). In addition, Ng and Feldman (2014) showed in a meta-analysis that subjective career success could be undermined by career hurdles related to personality, motivation, social networks, and support.

There have been some major developments in the conceptualization and measurement of career success in recent years. One such advancement is the work of Shockley, Ureksoy, Rodopman, Poteat, and Dullaghan (2016) that developed and validated the subjective career success inventory (SCCI) and argued that subjective career success is a multidimensional construct consisting of eight dimensions: being acknowledged and valued by others (i.e., *recognition*), producing high-quality products or services (i.e., *quality work*), engaging in work that is personally or socially valued (i.e., *meaningful work*), having an impact on others (i.e., *influence*), shaping one’s career according to personal needs and preferences (i.e., *authenticity*), having a career that positively impacts life outside of work (i.e., *personal life*), developing new knowledge and skills (i.e., *growth and development*), and experiencing positive feelings toward one’s career in general (i.e., *satisfaction*). Another

recent development is based on the work of the 5C group, which is a collection of career scholars worldwide that have collected data on career success currently in 35 countries. They argue that subjective career success consists of three key dimensions: growth, design for life, and material output (Mayrhofer et al., 2016). First, *growth* focuses mainly on learning and development as a foundation for experiencing career success. Second, *design for life* includes achieving a positive work–life balance, making an impact, and having positive social relationships. Finally, *material outcomes* are about financial security and financial success, emphasizing that these basic needs are also a crucial part of career success experiences. The model presented by Mayrhofer et al. (2016) is unique in that it captures dimensions of career success validated across the globe in many different countries. The work of Shockley et al. (2016) and Mayrhofer et al. (2016) are confirmation that subjective career success is a multidimensional construct that is more complex than career satisfaction alone.

An important final note is that career success has typically been considered as an ultimate career outcome. In a recent review, Spurk, Hirschi, and Dries (2019) argue that this offers an incomplete understanding of career success, as achieving such success is not an endpoint but rather a continuing process. They note that it is important to differentiate between objective and subjective career success when studying outcomes, arguing that, for example, attitudes regarding one's long-term career are likely more strongly impacted by subjective rather than objective career success experiences.

Career Success in Project Management Research

The construct of career success is not mobilized systematically by project management scholars. Examples of work where the construct comes to bear include Savelsbergh et al. (2016), who identify the conditions under which project managers might achieve successful careers, and so examine antecedents of career success for project managers. They argue that “knowing more about how project managers guide themselves in their *development towards success* and high professional standards may increase effective support for their self-guidance” (p. 561, emphasis added). On a related note, Palm and Lindahl (2015) argue that, in comparison with permanent managerial positions, project managers could find themselves stuck into a position with few or no career paths or opportunities for development, which relates closely to the idea of achieving career success. Crawford et al. (2013) also focus on what is “necessary for a successful project management career” (p. 1180), citing people management skills, an ability to work with others and to develop swift trust as important factors for career success, as well as factors such as mentoring and coaching, action learning, and reflective practice to support project managers in attaining career success.

Indirect links between discussions of project management careers and the concept of career success are prevalent. Ekrot, Rank, and Gemünden (2016) discuss the concept of “career

path quality,” which is related to career success. Their measure of career path quality includes items to measure how the project manager career path compares to the regular line manager career path and thus the attractiveness of the project manager career path in a particular context. Crawford et al. (2013) discuss subjective perceptions of career success in their article on career paths and issues for workers in the project-based economy. They foreground the issues of subjective career success when they argue that there has been an enhanced focus on achieving life goals and psychological aspects of success, as well as noting that there may be gender and generational differences in judgments regarding project managers' career success.

Employability

While the concept of employability has been around since the 1950s (March & Simon, 1958), it has gained momentum since the early 2000s. Employability can be characterized as the possibility of an employee to gain employment in the internal or external labor market (Forrier & Sels, 2003). Given the rise of flexible and temporary work arrangements, employability has been put forward as an important employment security mechanism. Different approaches to employability exist, which Forrier, Verbruggen, and De Cuyper (2015) divided into input-based and outcome-based approaches. First, both the competence-based approach (Van der Heijde & Van der Heijden, 2006) and the dispositional approach (Fugate, Kinicki, & Ashforth, 2004) are considered input approaches, as they advocate specific competencies and individual characteristics that help individuals become employable. According to Van der Heijde and Van der Heijden (2006), the core employability competencies are occupational expertise, anticipation and optimization, personal flexibility, corporate sense, and balance. These competencies are assumed to be malleable and form the foundation for a person's chances on the (internal and external) labor market. The framework of Fugate et al. (2004) puts forward five main characteristics of employability: work and career resilience, openness to changes at work, work and career proactivity, career motivation, and work identity. According to their model, employability is an individual characteristic that fosters adaptive behaviors and positive outcomes (Fugate & Kinicki, 2008). Thus, according to the dispositional view on employability, individuals who are, for example, more resilient and more open to changes, will be more adaptable and, ultimately, more employable. The competence-based and dispositional frameworks are both considered to be a form of “movement capital” (Forrier, Sels, & Stynen, 2009) that enables individuals to obtain and retain employment. In other words: these employability competencies and characteristics should allow individuals to achieve employment security throughout their career.

In terms of the process model of Forrier et al. (2015), perceived employability is considered an outcome-based approach. Perceived employability concerns the individual's

perceptions of their opportunities of obtaining and maintaining employment (Vanhercke, De Cuyper, Peeters, & De Witte, 2014) and can be divided into perceived internal and external employability. At its core, perceived employability is an overall estimation of one's employability based on both personal factors (e.g., competencies and dispositions) and structural factors (e.g., labor market opportunities). Taken together, the three approaches to employability are assumed to be part of a dynamic chain (Forrier et al., 2009) that ultimately fosters employment security for individuals. Although employability is advanced as a positive outcome for all, recent insights have emphasized that there is a potential dark side in terms of a so-called Matthew effect: Those who are employable are likely to become even more employable, whereas those who are not employable typically may lack sufficient resources to invest in their employability and therefore become even less employable (Forrier, De Cuyper, & Akkermans, 2018).

Employability in Project Management Research

Bredin and Söderlund (2013) discuss the importance of “employability strengthening opportunities” (p. 891) to argue that employability is a hallmark of new career patterns with direct implications for project-based organizations that then “need to meet the growing requirements to attract, retain, and develop talent” (p. 891). Employability is also a key construct in an article by Loogma et al. (2004) on the impact of careers in IT, where increasing flexibility is required and uncertainty and ambiguity are prevalent. Their study deals with work-related identities in light of increasing flexibility and mobility requirements, and they argue that “Employees’ ability to deal with those changes largely determines their future employability” (Loogma et al., 2004, p. 323). Finally, employability is referred to in an article by Crawford et al. (2013, p. 1178) that discusses a shift from job security to employability, and argues that many workers nowadays look for organizations that will support them in their development and their desires for varied career experiences. All of the articles we reviewed for this study implicitly refer to employability, as in the possibility of an employee to gain employment in the internal or external labor market. For this reason, we regard employability as a highly relevant career concept for project managers, and one that may be especially important for understanding the relatively flexible and dynamic career paths of project managers.

Career Resources

Career resources are knowledge, skills, and abilities that enable individuals to actively craft their careers (cf. Akkermans & Tims, 2017). Such career resources are a core part of some of the theoretical perspectives we discussed earlier, such as the boundaryless career (i.e., knowing why, knowing whom, knowing how) and the protean career (i.e., self-awareness, adaptability). Recent developments have mostly focused on

two main career resources: career competencies and career adaptability (for a comparison, see Akkermans, Paradniké, Van der Heijden, & De Vos, 2018; De Vos et al., 2019a). First, career competencies are knowledge, skills, and abilities central to career development, which can be developed by the individual (Akkermans, Brenninkmeijer, Huibers, & Blonk, 2013), and they enable individuals to effectively navigate their careers. These career competencies consist of three dimensions: *reflective career competencies*, which include reflection on motivation and reflection on qualities; *communicative career competencies*, which include networking and self-profiling; and *behavioral career competencies*, which include work exploration and career control. Mastering career competencies enables individuals to, among other things, prepare for major career transitions (Mayotte, 2003), achieve career success (Eby et al., 2003), be more employable (Blokker et al., 2019), become more engaged in their work (Akkermans, Schaufeli, Brenninkmeijer, & Blonk, 2013), and actively craft their work and careers (Akkermans & Tims, 2017).

Another important career resource that has received ample attention in the recent career literature is career adaptability, which is a psychosocial resource for coping with current and anticipated career-related tasks, transitions, and traumas (Savickas & Porfeli, 2012). Similar to career competencies, career adaptability is a malleable resource that allows individuals to solve complex problems throughout their careers (Hirschi, Herrmann, & Keller, 2015). There are four career adaptability resources: *concern* (i.e., becoming concerned about the career-related future), *control* (i.e., trying to prepare for one's vocational future), *curiosity* (i.e., exploring future scenarios), and *confidence* (i.e., strengthening the confidence to pursue one's aspirations). A recent meta-analysis (Rudolph, Lavigne, & Zacher, 2017) demonstrated that individuals with higher levels of career adaptability show more adaptivity (e.g., self-esteem), adapting (e.g., career planning), and adaptation (e.g., employability).

Both career resources described in this section are closely related to the theoretical perspectives that were mentioned earlier. Career competencies have been at the core of research on boundaryless, protean, and sustainable careers. Similarly, career adaptability is one of the key constructs in CCT. Although they share conceptual similarities—both are malleable resources that enable individuals to navigate their careers—they are different constructs. The primary conceptual distinction lies in the focus on proactive competency development (i.e., career competencies) versus being able to effectively adapt to challenges (i.e., career adaptability). It is, however, likely that there would be a positive spillover between the two career resources. As such, both are critical components of contemporary career development.

Career Resources in Project Management Research

Direct links to the concept of career resources are not common in project management literature, suggestive of its practical

focus and the tendency to discuss career issues in a general rather than theoretically underpinned way. Perhaps the most direct link is in the work of Crawford et al. (2013), which explores issues related to workplace support and mentoring for career development in a project-based economy. A recent article by Nijhuis, Vrijhoef, and Kessels (2018) also touched on this issue: In their review of project manager competencies, they conclude that the emphasis of research has been on job-related competencies, whereas there should be more focus on developmental competencies (i.e., what we refer to in this article as career competencies).

We have also identified numerous articles where career resources are indirectly linked with projects and their management. Ekrot et al. (2016) articulate the required career resources for project managers in terms of perspectives and paths, noting that the inherent short-term orientation of project work is often a barrier for developing such career resources. Zeitz et al. (2009) discuss institutional resources to support the boundaryless career, and in so doing, refer to challenges associated with project-based work and careers. Although not directly discussing them, many links can be made to the challenges of project-based careers and the relevance of institutional resources to support them. They specify the types of resources they consider important, including job retraining, enhanced occupational identity, and work-related information. Interestingly, the authors emphasize that career resources are not only personal resources (e.g., knowledge and skills) but can also include organizationally provided resources, such as mentoring and counseling.

There are some examples of career resources being indirectly mentioned in the project management literature. Parker and Skitmore (2005) studied career motives, prospects, and opportunities, and their role in potential turnover and success among project managers. Hölzle (2010) wrote about career paths for project managers and, indirectly, career success. Although she does not mobilize the core construct of career resources explicitly, these career paths do include potential resources that can be leveraged.

Table 2 provides an integration of career constructs with existing project management research.

Integrating Project Management and Careers: A Research Agenda

Our review clearly shows that: (1) In the emerging literature that integrates career and project management research, one perspective dominates, and that is the boundaryless career; (2) there is potential for an outside-in approach, in which scholars systematically mobilize careers literature to enrich project management research; and (3) there is potential for an inside-out perspective, in which project management can be used as a valuable context for studying careers. Following, we elaborate on a number of potentially fruitful avenues for future research.

Table 2. Summary of Explicit and Implicit References to Core Career Constructs

Core Career Constructs	Explicit Reference to Career Constructs	Implicit Reference to Career Constructs
Career success	<ul style="list-style-type: none"> – Crawford et al. (2013) – Palm and Lindahl (2015) – Savelsbergh et al. (2016) 	<ul style="list-style-type: none"> – Crawford et al. (2013) – Ekrot et al. (2016)
Employability	<ul style="list-style-type: none"> – Bredin and Söderlund (2013) – Crawford et al. (2013) – Loogma et al. (2004) 	<ul style="list-style-type: none"> – Turner et al. (2008) – Ekrot et al. (2016) – Palm and Lindahl (2015) – Turner and Müller (2003) – Savelsbergh et al. (2016) – Lloyd-Walker et al. (2016) – Hölzle (2010) – Parker and Skitmore (2005) – Tempest and Starkey (2004) – Welch et al. (2008) – Zeitz et al. (2009) – Crawford et al. (2015) – Manning (2010) – Skilton (2009) – Skilton and Bravo (2008) – Patton and McMahon (2006)
Career resources	<ul style="list-style-type: none"> – Crawford et al. (2013) 	<ul style="list-style-type: none"> – Ekrot et al. (2016) – Hölzle (2010) – Parker and Skitmore (2005) – Zeitz et al. (2009)

Opportunities for Integrating Project Management Research and Career Theories

The systematic mobilization of career theories and constructs offers wide scope for developing project management scholarship on careers, career types, and antecedents as well as outcomes of career success for project managers and professionals. Our review shows some development, but also indicates possibilities for greater integration between the two fields in the future. To date, boundaryless career theory features most strongly in project management scholarship. Even here, however, a tendency toward referencing boundaryless careers in passing sometimes replaces systematic mobilization of the theory to propose and test key relationships and outcomes, or offer novel insights premised on the project management context. Specifically, we identify opportunities for positive cross-fertilization of ideas based on the recent developments in boundaryless career theory urging more attention for boundaries and structural constraints on careers of project managers

(Inkson et al., 2012; Tams & Arthur, 2010). The main focus—in career and project management literature alike—has been on individual agency, and on the relative boundarylessness of (project managers') careers. However, a more specific focus on the types of project contexts and boundaries would be important to take into account when studying project managers' careers, for example, by examining how project boundaries and organizational boundaries might help or hinder project managers' career development. Similarly, not every project manager is likely to pursue boundarylessness at all times, and they might have motivations to be bound to a certain project context for a longer period of time, for example, because it offers them a particularly meaningful working environment. Applying such a lens when using boundaryless career theory might shed new light and a more nuanced view on their career paths and decisions.

There is also a need to expand career-related studies in project management research beyond only the boundaryless career perspective. Research using a protean career lens might shed more light on the role of value-driven career management and self-directedness in project managers' careers (Briscoe & Hall, 2006). Protean and boundaryless career theories have often been treated almost as synonyms, and more differentiation between these two when analyzing project managers' careers would be a valuable research aim. This can be achieved by including measures of boundaryless versus protean career attitudes (cf. Briscoe et al., 2006; Rodrigues, Butler, & Guest, 2019). For example, and related to the previous paragraph, for some project managers, it might be in line with their career values to be highly mobile and flexible between different projects, whereas others might pursue more stability in their career. Researching the existence of variability on these issues is necessary to move the focus away from generalities in career discussions to more depth and nuance when studying project-based organizations as a context.

Furthermore, using SCCT and CCT as foundational theories for project management studies can help to create a more in-depth understanding of the mechanisms and processes of constructing a successful career as a project manager. These theories are a good fit for research on project managers' careers because they emphasize the interrelations among personal characteristics, contextual elements, and actual behavior. Particularly CCT, with its focus on active career construction and adaptive behaviors in turbulent careers, is a valuable perspective for understanding how project managers can deal with the high level of uncertainty and flexibility in their careers, and ultimately become adaptable and successful. Such studies will not only enrich the project management literature but also the careers literature, as projects offer a unique type of context that can shed new light on previously theorized mechanisms.

Insights from the recently developed perspective of the sustainable career are also likely to offer valuable opportunities for integration of knowledge (De Vos et al., 2019b). The emphasis in the sustainable careers field on careers as sequences of experiences can likely be enriched by considering how such

sequences involve the continual entering and exiting of projects, and a rich variety of patterns of continuity and change over time that are premised on the crossing of both social and temporal spaces that comprise project-based careers. Likewise, sustainable careers' discourses stress the use and regeneration of resources (Barthauer, Kaucher, Spurk, & Kauffeld, 2019; Ehnert, 2009), which could underpin a more humane and less utilitarian discourse on people in projects. Additionally, working on projects is often related to seeing the outcome of one's own work, and this is motivating, providing meaning to the work of project managers and project professionals more generally (Huemann, 2016). The sustainable career perspective has, therefore, much to offer project management scholars to help broaden the perspective beyond the strong and almost singular focus on existing models that prioritize individual agency.

Opportunities for Integrating Project Management Research and Career Constructs

There are opportunities to better mobilize career success as a construct for project management careers research given the growing importance of careers on projects and in project-based organizations. While some research has been done on project managers' career success, the literature is limited at best. However, given the unique career path of project managers, it would be important to examine what factors determine their career success, both in terms of agentic behaviors and potential career shocks (Akkermans et al., 2018). Perhaps for some project managers, getting into this role may be a shocking event in itself, especially because it is rarely a fully planned career step. It would be highly interesting to explore how such events impact project managers' careers. Recently introduced conceptualizations of career success such as those by Shockley et al. (2016) and Mayrhofer et al. (2016) might provide fruitful starting points for an in-depth examination of career success experiences among project managers. At the same time, the project management context offers many opportunities for better understanding career success as a construct given the unique career paths within project work. It is worth examining if the construct of career success is the same for project managers as it is for employees working primarily in non-temporary organizations, and whether or not it comprises different elements. This is especially interesting in light of the fact that project management is often referred to as an "accidental profession." How does this impact dimensions and perceptions of career success, and does this perhaps change across career stages and project types? Also, in some contexts (e.g., the German labor market) project managers have less prestige than line managers, though they do comparably complex work. In such situations, project managers might consider a future role as a line manager preferable to that of a project manager, thus implying that continuing to be a project manager in the long run might relate negatively to experiences of career success. Such issues need to be researched in more detail.

In addition to studying the experience and attainment of success in their careers, it is also imperative to better understand the antecedents and outcomes of project managers' ability to obtain and retain continued employment. Therefore, studies are required to investigate the employability of project professionals as they are moving from one project to another within a project-based organization or between project-oriented organizations, as projects are playing more important roles in many economies (Schoper, Ingason, & Fridgeirsson, 2018) as well as in society overall (Lundin, Arvidsson, Brady, Ekstedt, & Midler, 2015). We would speculate that employability is an especially important topic to study among project managers, as the nature of their role requires them to constantly be aware of their employability, for example, because of the many transitions they face between projects, and thus the ever-changing competencies that are needed for different projects. There is a clear win-win scenario here for career and project management researchers. On the one hand, the unique context of project managers' careers—characterized by different projects, different stakeholders, and different commitments to various parties—offers a valuable opportunity for understanding the dynamics and contextual nature of employability. At the same time, a differentiated understanding of facets of employability, such as the input-based and outcome-based conceptualizations, would be a fruitful way of analyzing project managers' employability. For example, which types of employability competencies would be needed for project managers, and are they the same as the ones distinguished in the existing literature? Similarly, what is the role of perceived employability in the well-being and performance of project managers? It would be useful to incorporate existing knowledge in this area (e.g., Forrier et al., 2015) to examine antecedents and outcomes of employability among project managers and professionals. In addition, as Forrier et al. (2018) noted, employability is contextual, relational, and potentially polarizing. This has important implications for project managers, as their context is rather unique, and the relational aspect comes to the fore in terms of dealing with many stakeholders. A polarizing aspect may be at play with successful project managers becoming ever more successful, while those who are not might only experience further challenges and problems. More research is needed to fully understand these dynamics.

Yet another key avenue for future research is to examine the competencies that project managers can develop to become employable and successful. Hence, we urgently need studies on the resources required by project managers for developing their careers. The emphasis on agency in project management studies has been high, with strong contributions forthcoming on what individual attributes and competencies are associated with career paths and development of project professionals. However, attention to the resources available *on projects* for career progression—objective as well as subjective career success—is underdeveloped to date (Keegan et al., 2018). A focus on mentoring as a career resource and source of support for project managers could also be advantageous. It is unclear, for

example, how organizations can best support mentoring in careers that traverse interorganizational boundaries and time-bound projects. In addition, although specific work-related competencies have been examined at length, *career* competencies (Akkermans et al., 2013) have scarcely been examined in the project management literature. It would be important to study, for example, which career-related competencies and adaptability dimensions would be crucial for successfully navigating project work. When looking into resources for careers of project professionals, the distinction between the individual career, and the career system organizations offer, as well as the interplay between these, is a potentially fruitful perspective. From a more practical perspective, a focus on the role that project management associations play in providing career resources for project managers and project professionals is timely.

In short, there are myriad possibilities for enhancing both project management and careers research by more closely integrating these two fields, and by each mobilizing the possibilities of the other for developing more nuanced and systematic understanding regarding the challenging and unique nature of project-based careers. Where this article takes a first step, we hope others will follow.

Conclusion: An Outside-In and Inside-Out Perspective on Project Management and Careers Research

In this review, we provided an overview of popular theories and constructs in careers research and examined the degree to which these have already been mobilized in project management research. In doing so, we integrated both literature streams, showing that there is still a lot to gain from further integration of project management and careers research. Both outside-in (i.e., using career theories and constructs in project management research) and inside-out (i.e., using project management as a valuable source of information and context in careers research) perspectives offer potential for future research.

Outside-In

Careers of project managers have thus far often been considered as “accidental,” suggesting that professionals happen to grow into careers as project managers, for example, because of exceptional performance in particular projects. Recently, there has been increasing attention in graduate programs to preparing young individuals for careers in project management and, by extension, to promoting project management as a deliberate career choice. However, precisely how project managers' careers evolve, and the behaviors and resources they could develop to be successful and sustainable, remains largely unexplored territory. Project management researchers can more systematically mobilize career theories and constructs to enhance

our knowledge of these issues. This review hopefully provides a valuable starting point for these endeavors.

Inside-Out

Careers research has consistently emphasized that careers are becoming more complex and flexible, and that the changing world of work poses new challenges for career success and sustainability. However, most careers research to date—either deliberately or because of convenience—focuses on traditional “employees in organizations.” The project management context offers a unique and valuable basis for careers researchers given its complex (e.g., having commitments to multiple stakeholders/employers, being under pressure to perform in a short period of time) and flexible (e.g., being in multiple projects simultaneously and consecutively) nature. In other words, project management—and, in a broader sense, project work—is exactly the kind of context that represents changes in contemporary careers. In this review, we have provided an overview of relevant studies in project management that explore these issues. These studies offer valuable resources for career researchers interested in project managers and project workers whose careers, in turn, offer potentially fascinating new insights into contemporary career dynamics.

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References

- Abele, A. E., & Spurk, D. (2009). The longitudinal impact of self-efficacy and career goals on objective and subjective career success. *Journal of Vocational Behavior*, 74(1), 53–62.
- Akkermans, J., Brenninkmeijer, V., Huibers, M., & Blonk, R. W. B. (2013). Competencies for the contemporary career: Development and preliminary validation of the career competencies questionnaire. *Journal of Career Development*, 40(3), 245–267.
- Akkermans, J., & Kubasch, S. (2017). #Trending topics in careers: A review and future research agenda. *Career Development International*, 22(6), 586–627.
- Akkermans, J., Paradniké, K., Van der Heijden, B. I. J. M., & De Vos, A. (2018). The best of both worlds: The role of career adaptability and career competencies in students' well-being and performance. *Frontiers in Psychology*, 9, 1678. doi:10.3389/fpsyg.2018.01678
- Akkermans, J., Schaufeli, W. B., Brenninkmeijer, V., & Blonk, R. W. B. (2013). The role of career competencies in the job demands-resources model. *Journal of Vocational Behavior*, 83(3), 356–366.
- Akkermans, J., Seibert, S. E., & Mol, S. T. (2018). Tales of the unexpected: Integrating career shocks in the contemporary careers literature. *SA Journal of Industrial Psychology*, 44, e1503. doi:10.4102/sajip.v44i0.1503
- Akkermans, J., & Tims, M. (2017). Crafting your career: How career competencies relate to career success via job crafting. *Applied Psychology: An International Review*, 66(1), 168–195.
- Arthur, M. B., Hall, D. T., & Lawrence, B. S. (1989). *Handbook of career theory*. New York, NY: Cambridge University Press.
- Arthur, M. B., Khapova, S. N., & Wilderom, C. P. M. (2005). Career success in a boundaryless career world. *Journal of Organizational Behavior*, 26(2), 177–202.
- Arthur, M. B., & Rousseau, D. M. (1996). Introduction: The boundaryless career as a new employment principle. In M. B. Arthur & D. M. Rousseau (Eds.), *The boundaryless career: A new employment principle for a new organizational era* (pp. 3–20). New York, NY: Oxford University Press.
- Bakker, A. B., & Demerouti, E. (2017). Job demands-resources theory: Taking stock and looking forward. *Journal of Occupational Health Psychology*, 22(3), 273–285.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.
- Barthauer, L., Kaucher, P., Spurk, D., & Kauffeld, S. (2019). Burnout and career (un) sustainability: Looking into the Blackbox of burnout triggered career turnover intentions. *Journal of Vocational Behavior*. Advance online publication. doi:10.1016/j.jvb.2019.103334
- Blokke, R., Akkermans, J., Tims, M., Jansen, P., & Khapova, S. (2019). Building a sustainable start: The role of career competencies, career success, and career shocks in young professionals' employability. *Journal of Vocational Behavior*, 112, 172–184.
- Blomquist, T., Farashah, A. D., & Thomas, J. (2016). Project management self-efficacy as a predictor of project performance: Constructing and validating a domain-specific scale. *International Journal of Project Management*, 34(8), 1417–1432.
- Blomquist, T., Hällgren, M., Nilsson, A., & Söderholm, A. (2010). Project-as-practice: In search of project management research that matters. *Project Management Journal*, 41(1), 5–16.
- Bredin, K., & Söderlund, J. (2013). Project managers and career models: An exploratory comparative study. *International Journal of Project Management*, 31(6), 889–902.
- Briscoe, J. P., & Hall, D. T. (2006). The interplay of boundaryless and protean careers: Combinations and implications. *Journal of Vocational Behavior*, 69(1), 4–18.
- Briscoe, J. P., Hall, D. T., & DeMuth, R. L. F. (2006). Protean and boundaryless careers: An empirical exploration. *Journal of Vocational Behavior*, 69(1), 30–47.
- Brown, S. D., Lent, R. W., Telander, K., & Tramayne, S. (2011). Social cognitive career theory, conscientiousness, and work performance: A meta-analytic path analysis. *Journal of Vocational Behavior*, 79(1), 81–90.
- Chudzikowski, K., Gustafsson, S., & Tams, S. (2019). Constructing alignment for sustainable careers: Insights from the career narratives of management consultants. *Journal of Vocational Behavior*. Advance online publication. doi:10.1016/j.jvb.2019.05.009
- Crawford, L., French, E., & Lloyd-Walker, B. (2013). From outpost to outback: Project career paths in Australia. *International Journal of Project Management*, 31(8), 1175–1187.

- Crawford, L., Lloyd-Walker, B., & French, E. (2015). Career choice and the experience of project-based work. *Procedia - Social and Behavioral Sciences*, 194, 55–64.
- Crevani, L., Lindgren, M., & Packendorff, J. (2010). Leadership, not leaders: On the study of leadership as practices and interactions. *Scandinavian Journal of Management*, 26(1), 77–86.
- DeFillippi, R. J., & Arthur, M. B. (1994). The boundaryless career: A competency-based perspective. *Journal of Organizational Behavior*, 15(4), 307–324.
- De Vos, A., Akkermans, J., & Van Der Heijden, B. I. J. M. (2019a) (in press). *From occupational choice to career crafting*. In H. Gunz, M. Lazarova, & W. Mayrhofer (Eds.), *The Routledge companion to career studies*. Oxon; NY: Routledge.
- De Vos, A., Dewettinck, K., & Buyens, D. (2009b). The professional career on the right track: A study on the interaction between career self-management and organizational career management in explaining employee outcomes. *European Journal of Work and Organizational Psychology*, 18(1), 55–80.
- De Vos, A., & Soens, N. (2008). Protean attitude and career success: The mediating role of self-management. *Journal of Vocational Behavior*, 73(3), 449–456.
- De Vos, A., Van Der Heijden, B. I. J. M., & Akkermans, J. (2019b) (in press). Sustainable careers: Towards a conceptual model. *Journal of Vocational Behavior*. Advance online publication. doi:10.1016/j.jvb.2018.06.011
- Direnzo, M. S., Greenhaus, J. H., & Weer, C. H. (2015). Relationship between protean career orientation and work-life balance: A resource perspective. *Journal of Organizational Behavior*, 36(4), 538–560.
- Eby, L. T., Butts, M., & Lockwood, A. (2003). Predictors of success in the era of the boundaryless career. *Journal of Organizational Behavior*, 24(6), 689–708.
- Ehnert, I. (2009). *Sustainable human resource management. A conceptual and exploratory analysis from a paradox perspective*. Berlin, Germany: Physica-Verlag.
- Ekrot, B., Rank, J., & Gemünden, H. G. (2016). Antecedents of project managers' voice behavior: The moderating effect of organization-based self-esteem and affective organizational commitment. *International Journal of Project Management*, 34(6), 1028–1042.
- El-Sabaa, S. (2001). The skills and career path of an effective project manager. *International Journal of Project Management*, 19(1), 1–7.
- Forrier, A., De Cuyper, N., & Akkermans, J. (2018). The winner takes it all, the loser has to fall: Provoking the agency perspective in employability research. *Human Resource Management Journal*, 28(4), 511–523.
- Forrier, A., & Sels, L. (2003). The concept employability: A complex mosaic. *International Journal of Human Resources Development and Management*, 3(2), 102–124.
- Forrier, A., Sels, L., & Stynen, D. (2009). Career mobility at the intersection between agent and structure: A conceptual model. *Journal of Occupational and Organizational Psychology*, 82(4), 739–759.
- Forrier, A., Verbruggen, M., & De Cuyper, N. (2015). Integrating different notions of employability in a dynamic chain: The relationship between job transitions, movement capital and perceived employability. *Journal of Vocational Behavior*, 89, 56–64.
- Frey, C. B., & Osborne, M. A. (2017). The future of employment: How susceptible are jobs to computerisation? *Technological Forecasting and Social Change*, 114(Supplement C), 254–280.
- Fugate, M., & Kinicki, A. J. (2008). A dispositional approach to employability: Development of a measure and test of implications for employee reactions to organizational change. *Journal of Occupational and Organizational Psychology*, 81(3), 503–527.
- Fugate, M., Kinicki, A. J., & Ashforth, B. E. (2004). Employability: A psycho-social construct, its dimensions, and applications. *Journal of Vocational Behavior*, 65(1), 14–38.
- Geraldi, J., & Söderlund, J. (2018). Project studies: What it is, where it is going. *International Journal of Project Management*, 36(1), 55–70.
- Ginzberg, E. (1972). Toward a theory of occupational choice: A restatement. *Vocational Guidance Quarterly*, 20(3), 2–9.
- Greenhaus, J. H., Parasuraman, S., & Wormley, W. M. (1990). Effects of race on organizational experiences, job performance evaluations, and career outcomes. *Academy of Management Journal*, 33(1), 64–86.
- Gubler, M., Arnold, J., & Coombs, C. (2014). Reassessing the protean career concept: Empirical findings, conceptual components, and measurement. *Journal of Organizational Behavior*, 35(S1), S23–S40.
- Hall, D. T. (1976). *Careers in organizations*. Pacific Palisades, CA: Goodyear.
- Hall, D. T. (1996). Protean careers of the 21st century. *The Academy of Management Executive*, 10(4), 8–16.
- Hall, D. T. (2004). The protean career: A quarter-century journey. *Journal of Vocational Behavior*, 65(1), 1–13.
- Hall, D. T., & Moss, J. E. (1998). The new protean career contract: Helping organizations and employees adapt. *Organizational Dynamics*, 26(3), 22–37.
- Hartung, P. J., & Taber, B. J. (2008). Career construction and subjective well-being. *Journal of Career Assessment*, 16(1), 75–85.
- Heslin, P. (2005). Conceptualizing and evaluating career success. *Journal of Organizational Behavior*, 26(2), 113–136.
- Hirschi, A., Herrmann, A., & Keller, A. C. (2015). Career adaptivity, adaptability, and adapting: A conceptual and empirical investigation. *Journal of Vocational Behavior*, 87, 1–10.
- Hirschi, A., Jaensch, V. K., & Herrmann, A. (2017). Protean career orientation, vocational identity, and self-efficacy: An empirical clarification of their relationship. *European Journal of Work and Organizational Psychology*, 26(2), 208–220.
- Hirschi, A., Steiner, R., Burmeister, A., & Johnston, C. S. (2019). A whole-life perspective of sustainable careers: The nature and consequences of nonwork orientations. *Journal of Vocational Behavior*. Advance online publication. doi:10.1016/j.jvb.2019.103319
- Holland, J. L. (1959). A theory of vocational choice. *Journal of Counseling Psychology*, 6(1), 35–45.
- Hölzle, K. (2010). Designing and implementing a career path for project managers. *International Journal of Project Management*, 28(8), 779–786.

- Hu, J., & Hirsh, J. (2017). The benefits of meaningful work: A meta-analysis. *Academy of Management Proceedings*, 2017(1), 13866. doi:10.5465/ambpp.2017.13866abstract
- Huemann, M. (2016). *Human resource management in the project-oriented organization: Towards a viable system for project personnel*. London, England: Routledge.
- Huemann, M., Keegan, A., & Turner, J. R. (2007). Human resource management in the project-oriented company: A review. *International Journal of Project Management*, 25(3), 315–323.
- Inkson, K., Gunz, H., Ganesh, S., & Roper, J. (2012). Boundaryless careers: Bringing back boundaries. *Organization Studies*, 33(3), 323–340.
- Jones, C. (1996). Careers in project networks: The case of the film industry. In M. B. Arthur & D. M. Rousseau (Eds.), *The boundaryless career: A new employment principle for a new organizational era* (Vol. 58, pp. 58–75). New York, NY: Oxford University Press.
- Jones, C., & DeFillippi, R. J. (1996). Back to the future in film: Combining industry and self-knowledge to meet the career challenges of the 21st century. *Academy of Management Perspectives*, 10(4), 89–103.
- Keegan, A., Ringhofer, C., & Huemann, M. (2018). Human resource management and project based organizing: Fertile ground, missed opportunities and prospects for closer connections. *International Journal of Project Management*, 36(1), 121–133.
- Keegan, A., & Turner, J. R. (2002). The management of innovation in project-based firms. *Long Range Planning*, 35(4), 367–388.
- Kerzner, H. (2017). *Project management: A systems approach to planning, scheduling, and controlling*. Hoboken, NJ: John Wiley & Sons.
- King, Z. (2004). Career self-management: Its nature, causes and consequences. *Journal of Vocational Behavior*, 65(1), 112–133.
- Kossek, E., & Lautsch, B. (2017). Work-life flexibility for whom? Occupational status and work-life inequality in upper, middle, and lower level jobs. *Academy of Management Annals*, 12(1), 5–36.
- Kossek, E. E., & Ollier-Malaterre, A. (2019). Desperately seeking sustainable careers: Redesigning professional jobs for the collaborative crafting of reduced-load work. *Journal of Vocational Behavior*. Advance online publication. doi:10.1016/j.jvb.2019.06.003
- Kraimer, M. L., Greco, L., Seibert, S. E., & Sargent, L. D. (2019). An investigation of academic career success: The new tempo of academic life. *Academy of Management Learning & Education*, 18(2), 128–152.
- Lent, R. W., & Brown, S. D. (2006). Integrating person and situation perspectives on work satisfaction: A social-cognitive view. *Journal of Vocational Behavior*, 69(2), 236–247.
- Lent, R. W., & Brown, S. D. (2013). Social cognitive model of career self-management: Toward a unifying view of adaptive career behavior across the life span. *Journal of Counseling Psychology*, 60(4), 557–568.
- Lent, R. W., Brown, S. D., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behavior*, 45(1), 79–122.
- Lent, R. W., Brown, S. D., & Hackett, G. (2002). Social cognitive career theory. In D. Brown & Associates (Eds.), *Career choice and development* (4th ed., Vol. 4, pp. 255–311). San Francisco, CA: Jossey-Bass.
- Lent, R. W., Taveira, M. D. C., Figuera, P., Dorio, I., Faria, S., & Gonçalves, A. M. (2017). Test of the social cognitive model of well-being in Spanish college students. *Journal of Career Assessment*, 25(1), 135–143.
- Lloyd-Walker, B., French, E., & Crawford, L. (2016). Rethinking researching project management: Understanding the reality of project management careers. *International Journal of Managing Projects in Business*, 9(4), 903–930.
- Loogma, K., Ümarik, M., & Vilu, R. (2004). Identification-flexibility dilemma of IT specialists. *Career Development International*, 9(3), 323–348.
- Lundin, R. A., Arvidsson, N., Brady, T., Ekstedt, E., & Midler, C. (2015). *Managing and working in project society*. Cambridge, UK: Cambridge University Press.
- Manning, S. (2010). The strategic formation of project networks: A relational practice perspective. *Human Relations*, 63(4), 551–573.
- March, J., & Simon, H. (1958). *Organizations*. New York, NY: John Wiley and Sons.
- Mayotte, G. A. (2003). Stepping stones to success: Previously developed career competencies and their benefits to career switchers transitioning to teaching. *Teaching and Teacher Education*, 19(7), 681–695.
- Mayrhofer, W., Briscoe, J. P., Hall, D. T., Dickmann, M., Dries, N., Dysvik, A., . . . Unite, J. (2016). Career success across the globe: Insights from the 5C project. *Organizational Dynamics*, 45(3), 197–205.
- Meskendahl, S. (2010). The influence of business strategy on project portfolio management and its success—A conceptual framework. *International Journal of Project Management*, 28(8), 807–817.
- Mirvis, P. H., & Hall, D. T. (1994). Psychological success and the boundaryless career. *Journal of Organizational Behavior*, 15(4), 365–380.
- Ng, T. W. H., Eby, L. T., Sorensen, K. L., & Feldman, D. C. (2005). Predictors of objective and subjective career success: A meta-analysis. *Personnel Psychology*, 58(2), 367–408.
- Ng, T. W. H., & Feldman, D. C. (2014). Subjective career success: A meta-analytic review. *Journal of Vocational Behavior*, 85(2), 169–179.
- Nijhuis, S., Vrijhoef, R., & Kessels, J. (2018). Tackling project management competence research. *Project Management Journal*, 49(3), 62–81.
- Ojeda, L., Flores, L. Y., & Navarro, R. L. (2011). Social cognitive predictors of Mexican American college students' academic and life satisfaction. *Journal of Counseling Psychology*, 58(1), 61–71.
- Palm, K., & Lindahl, M. (2015). A project as a workplace: Observations from project managers in four R&D and project-intensive companies. *International Journal of Project Management*, 33(4), 828–838.
- Parker, S. K., & Skitmore, M. (2005). Project management turnover: Causes and effects on project performance. *International Journal of Project Management*, 23(3), 205–214.
- Patton, W., & McMahon, M. (2006). The systems theory framework of career development and counseling: Connecting theory and

- practice. *International Journal for the Advancement of Counseling*, 28(2), 153–166.
- Richardson, J., & McKenna, S. (2019). An exploration of career sustainability in and after professional sport. *Journal of Vocational Behavior*. Advance online publication. doi:10.1016/j.jvb.2019.06.002
- Rodrigues, R. A., & Guest, D. (2010). Have careers become boundaryless? *Human Relations*, 63(8), 1157–1175.
- Rodrigues, R., Butler, C. L., & Guest, D. (2019). Antecedents of protean and boundaryless career orientations: The role of core self-evaluations, perceived employability and social capital. *Journal of Vocational Behavior*, 110, 1–11.
- Rudolph, C. W., Lavigne, K. N., & Zacher, H. (2017). Career adaptability: A meta-analysis of relationships with measures of adaptivity, adapting responses, and adaptation results. *Journal of Vocational Behavior*, 98, 17–34.
- Rudolph, C. W., Zacher, H., & Hirschi, A. (2019). Empirical developments in career construction theory. *Journal of Vocational Behavior*, 111, 1–6.
- Savelsbergh, C. M. J. H., Havermans, L. A., & Storm, P. (2016). Development paths of project managers: What and how do project managers learn from their experiences? *International Journal of Project Management*, 34(4), 559–569.
- Savickas, M. L. (2002). Career construction. In D. Brown & Associates (Eds.), *Career choice and development* (Vol. 149, pp. 149–205). San Francisco, CA: Jossey-Bass.
- Savickas, M. L. (2005). The theory and practice of career construction. In S. D. Brown & R. W. Lent (Eds.), *Career development and counseling: Putting theory and research to work* (Vol. 1, pp. 42–70). Hoboken, NJ: Wiley.
- Savickas, M. L., & Porfeli, E. J. (2012). Career Adapt-Abilities Scale: Construction, reliability, and measurement equivalence across 13 countries. *Journal of Vocational Behavior*, 80(3), 661–673.
- Schein, E. H. (1978). *Career dynamics: Matching individual and organizational needs* (Vol. 6834). Reading, MA: Addison Wesley Publishing Company.
- Schooper, Y.-G., Wald, A., Ingason, H. T., & Fridgeirsson, T. V. (2018). Projectification in Western economies: A comparative study of Germany, Norway and Iceland. *International Journal of Project Management*, 36(1), 71–82.
- Seibert, S. E., & Kraimer, M. L. (2001). The five-factor model of personality and career success. *Journal of Vocational Behavior*, 58(1), 1–21.
- Seibert, S. E., Kraimer, M. L., & Heslin, P. A. (2016). Developing career resilience and adaptability. *Organizational Dynamics*, 45(3), 245–257.
- Sheu, H.-B., Lent, R. W., Brown, S. D., Miller, M. J., Hennessy, K. D., & Duffy, R. D. (2010). Testing the choice model of social cognitive career theory across Holland themes: A meta-analytic path analysis. *Journal of Vocational Behavior*, 76(2), 252–264.
- Shockley, K. M., Ureksoy, H., Rodopman, O. B., Poteat, L. F., & Dullaghan, T. R. (2016). Development of a new scale to measure subjective career success: A mixed-methods study. *Journal of Organizational Behavior*, 37(1), 128–153.
- Skilton, P. F. (2009). Knowledge based resources, property based resources and supplier bargaining power in Hollywood motion picture projects. *Journal of Business Research*, 62(8), 834–840.
- Skilton, P. F., & Bravo, J. (2008). Do social capital and project type vary across career paths in project-based work? The case of Hollywood personal assistants. *Career Development International*, 13(5), 381–401.
- Spurk, D., Hirschi, A., & Dries, N. (2019). Antecedents and outcomes of objective versus subjective career success: Competing perspectives and future directions. *Journal of Management*, 45(1), 35–69.
- Straub, C., Vinkenburgh, C. J., & van Kleef, M. (2019). Career customization: Putting an organizational practice to facilitate sustainable careers to the test. *Journal of Vocational Behavior*. Advance online publication. doi:10.1016/j.jvb.2019.103320
- Sullivan, S. E., & Arthur, M. B. (2006). The evolution of the boundaryless career concept: Examining physical and psychological mobility. *Journal of Vocational Behavior*, 69(1), 19–29.
- Super, D. E. (1957). *The psychology of careers: An introduction to vocational development*. Oxford, England: Harper & Bros.
- Tams, S., & Arthur, M. B. (2010). New directions for boundaryless careers: Agency and interdependence in a changing world. *Journal of Organizational Behavior*, 31(5), 629–646.
- Tempest, S., & Starkey, K. (2004). The effects of liminality on individual and organizational learning. *Organization Studies*, 25(4), 507–527.
- Turner, J. R., & Müller, R. (2003). On the nature of the project as a temporary organization. *International Journal of Project Management*, 21(1), 1–8.
- Turner, R., Huemann, M., & Keegan, A. (2008). Human resource management in the project-oriented organization: Employee well-being and ethical treatment. *International Journal of Project Management*, 26(5), 577–585.
- Van der Heijde, C. M., & Van Der Heijden, B. I. J. M. (2006). A competence-based and multidimensional operationalization and measurement of employability. *Human Resource Management*, 45(3), 449–476.
- Van Der Heijden, B. I. J. M., & De Vos, A. (2015). Sustainable careers: Introductory chapter. In A. De Vos & B. I. J. M. Van Der Heijden (Eds.), *Handbook of research on sustainable careers* (pp. 1–19). Cheltenham, UK: Edward Elgar Publishing.
- Vanhercke, D., De Cuyper, N., Peeters, E., & De Witte, H. (2014). Defining perceived employability: A psychological approach. *Personnel Review*, 43(4), 592–605.
- Wang, M., & Wanberg, C. R. (2017). 100 years of applied psychology research on individual careers: From career management to retirement. *Journal of Applied Psychology*, 102(3), 546–563.
- Welch, C. L., Welch, D. E., & Tahvanainen, M. (2008). Managing the HR dimension of international project operations. *The International Journal of Human Resource Management*, 19(2), 205–222.
- Winch, G. M. (2014). Three domains of project organising. *International Journal of Project Management*, 32(5), 721–731.
- Zacher, H. (2014). Career adaptability predicts subjective career success above and beyond personality traits and core self-evaluations. *Journal of Vocational Behavior*, 84(1), 21–30.

Zeitz, G., Blau, G., & Fertig, J. (2009). Boundaryless careers and institutional resources. *The International Journal of Human Resource Management*, 20(2), 372–398.

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